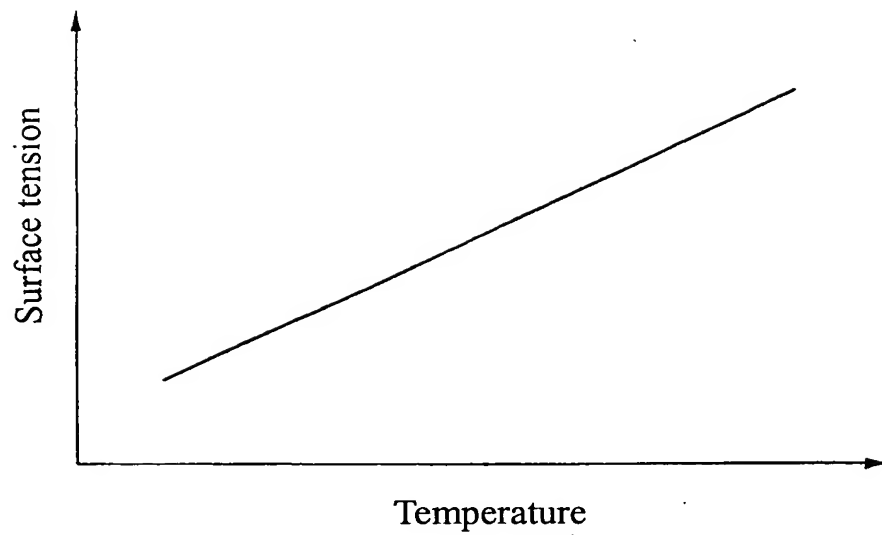
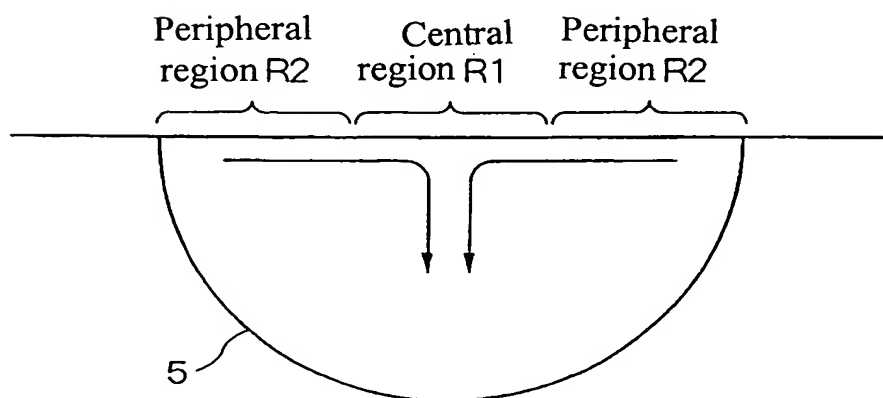




FIG. 1

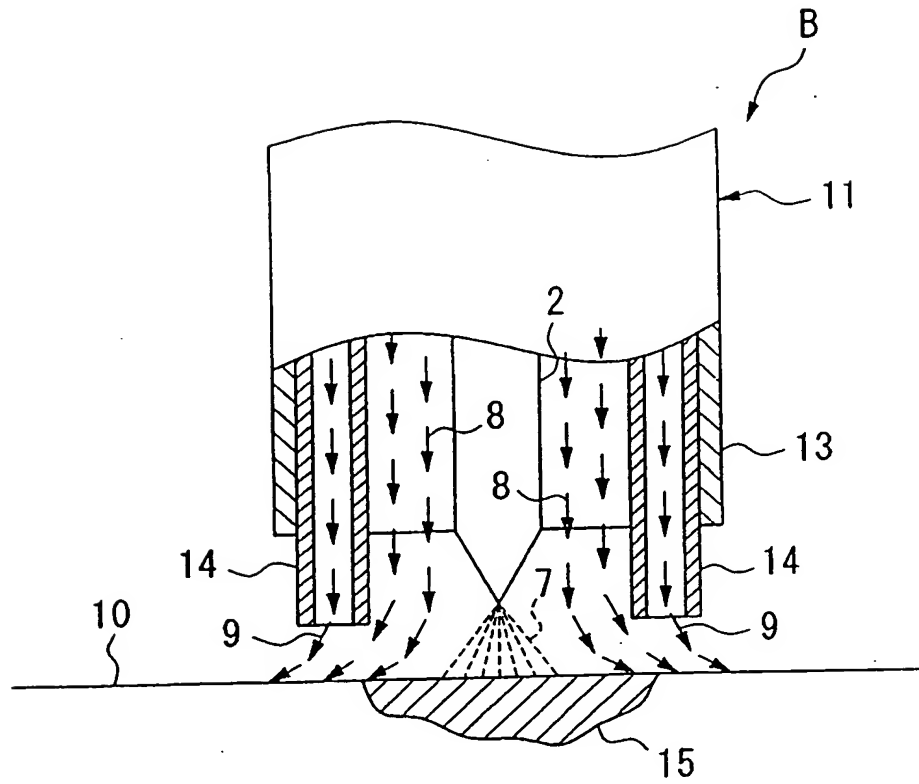


(a)

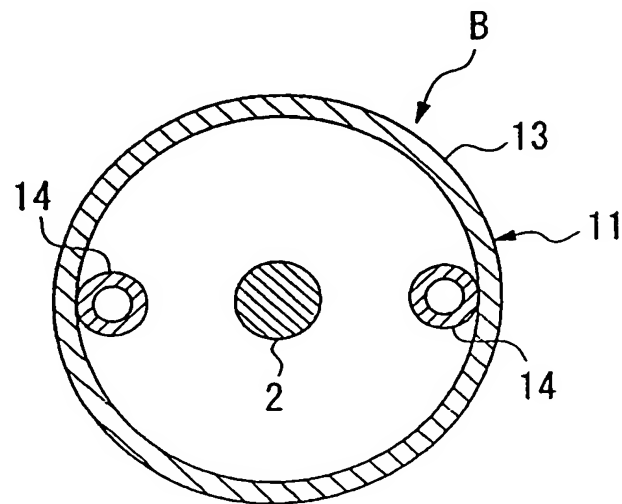


(b)

FIG. 2



(a)



Welding direction

(b)

FIG. 3

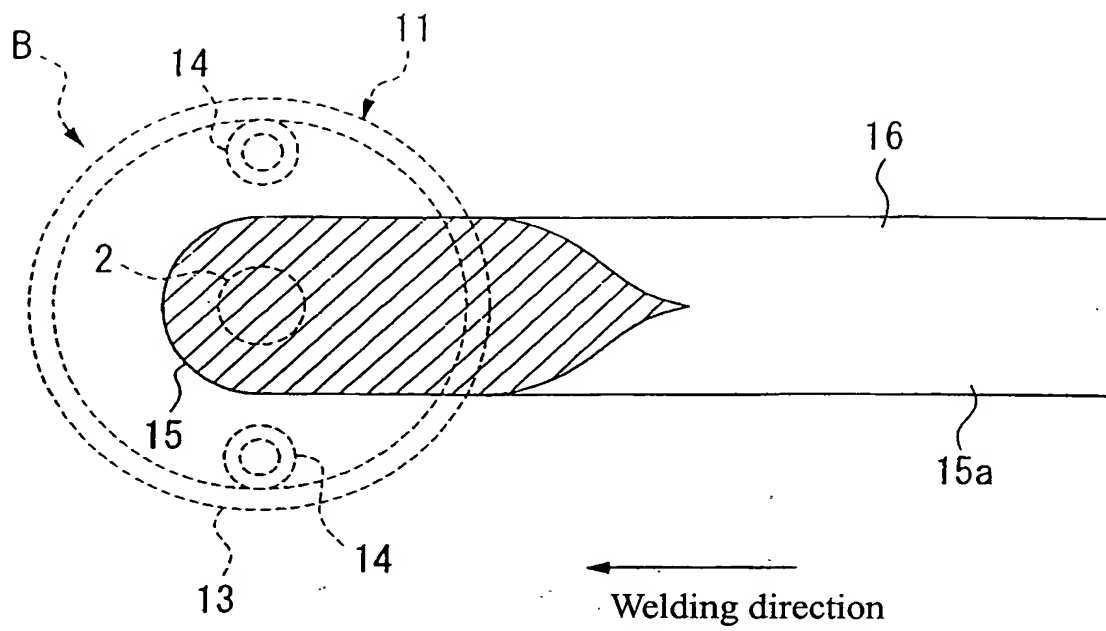
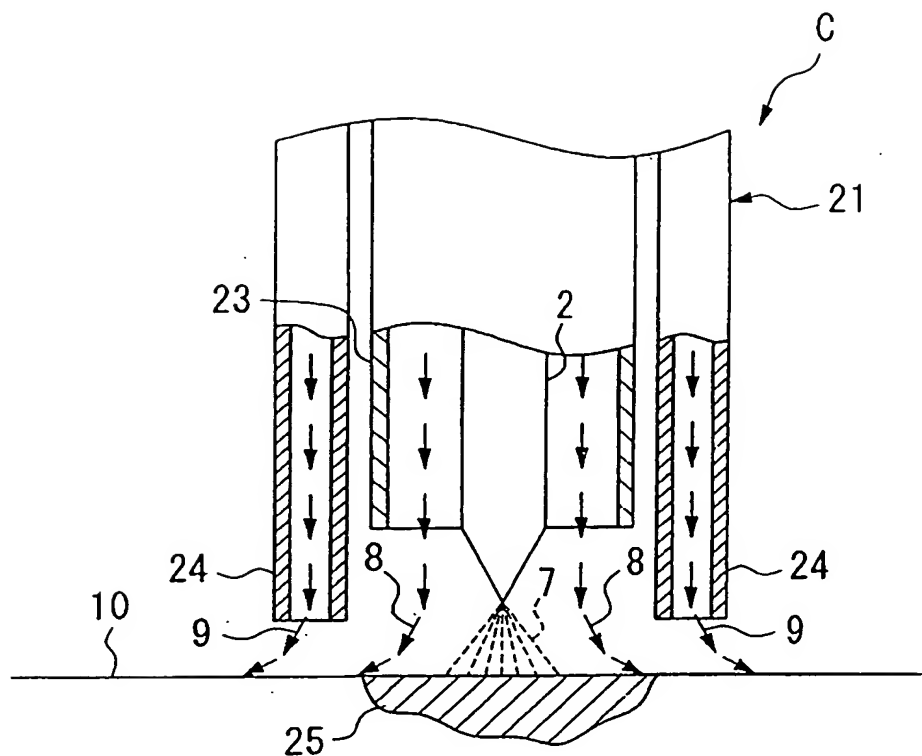
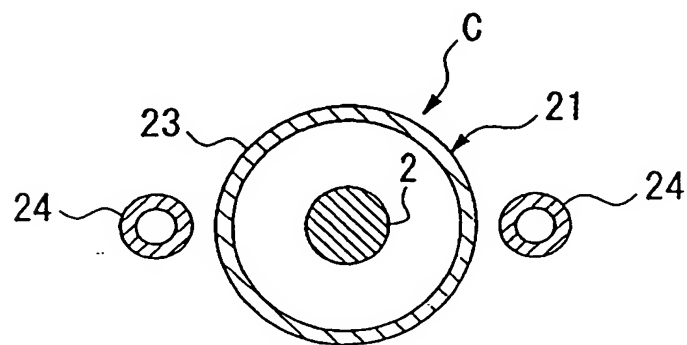


FIG. 4



(a)



↓
Welding direction

(b)

FIG. 6

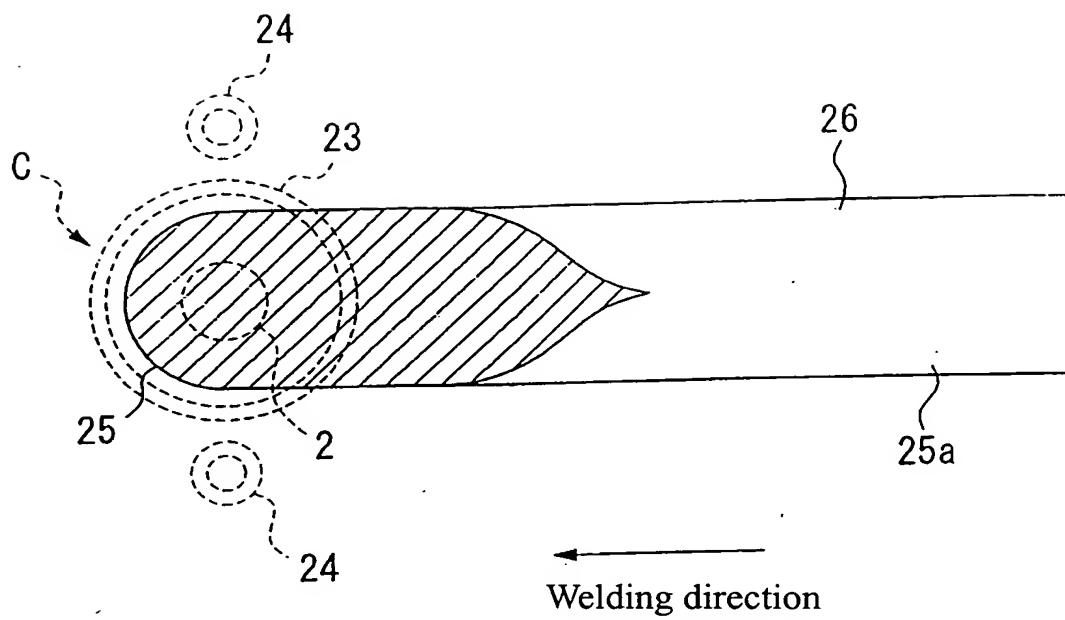


FIG. 7

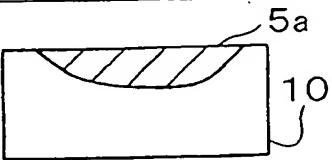
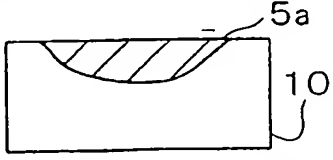
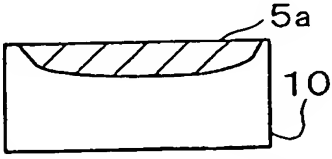
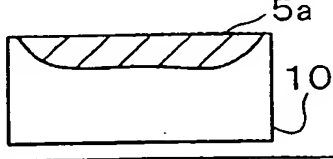
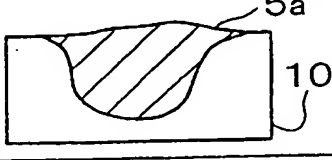
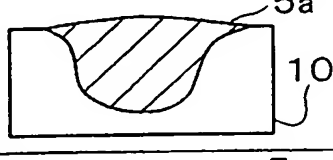
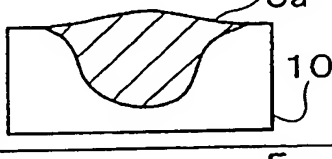
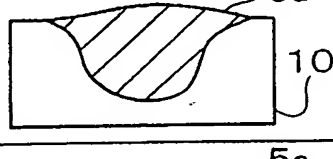
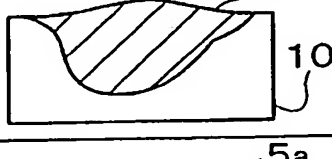
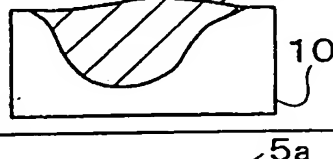




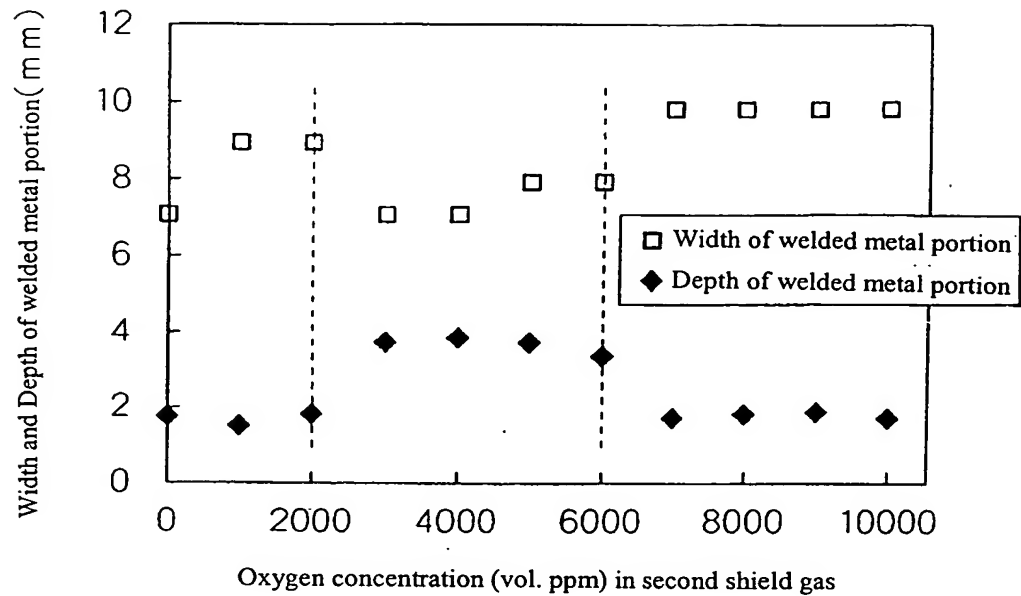
Oxygen concentration (vol. ppm) in second shield gas	Flow rate of second shield gas	
	10L/min	20L/min
0 (pure argon)		
1000		
3000		
4000		
5000		
7000		
9000		

FIG. 9

(a) Flow rate of second shield gas = 10L/min



(b) Flow rate of second shield gas = 20L/min

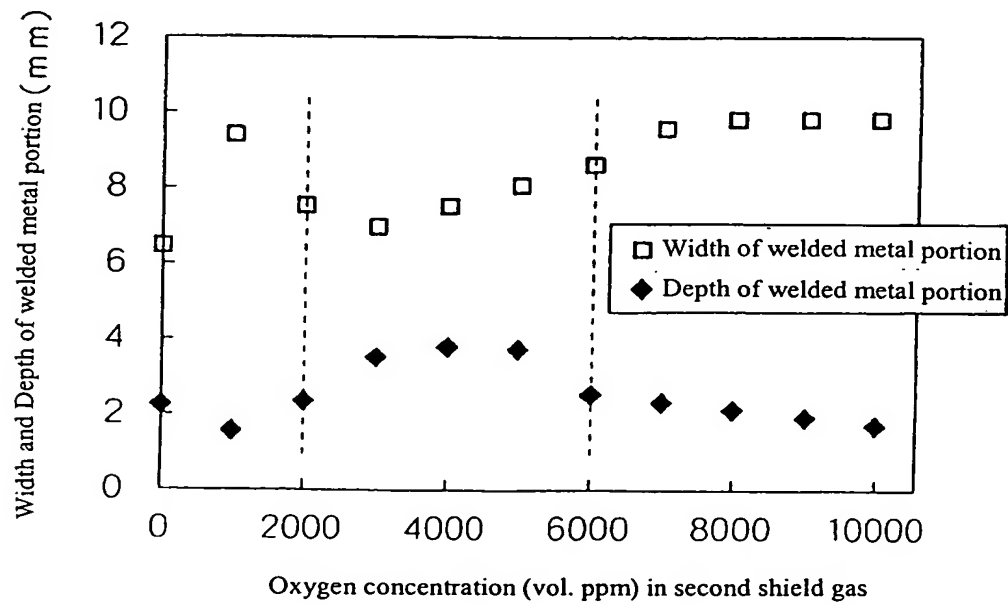
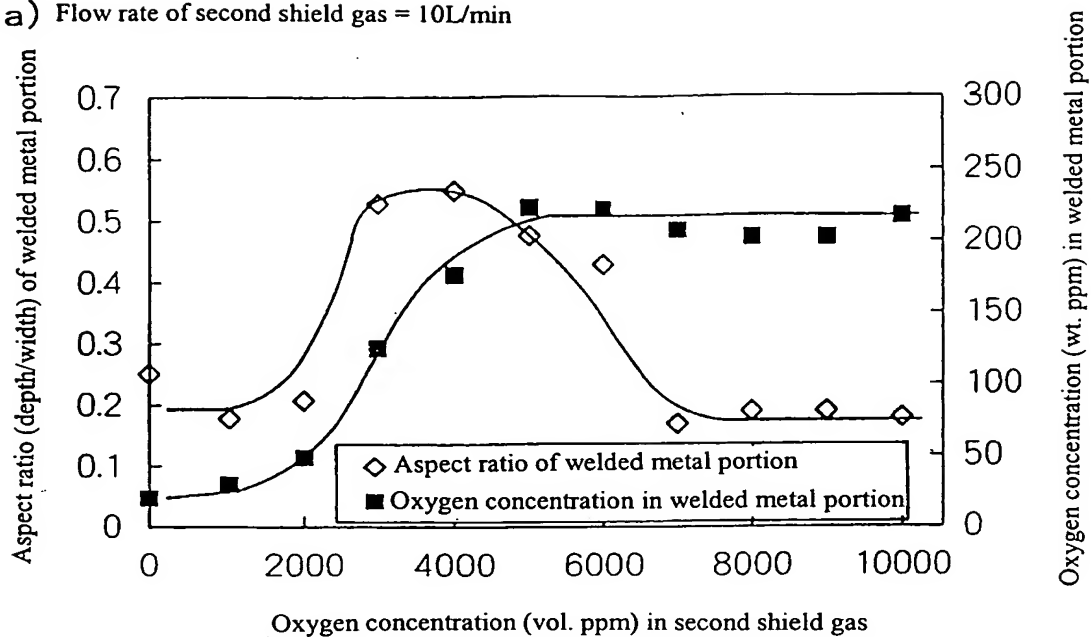


FIG. 10

(a) Flow rate of second shield gas = 10L/min



(b) Flow rate of second shield gas = 20L/min

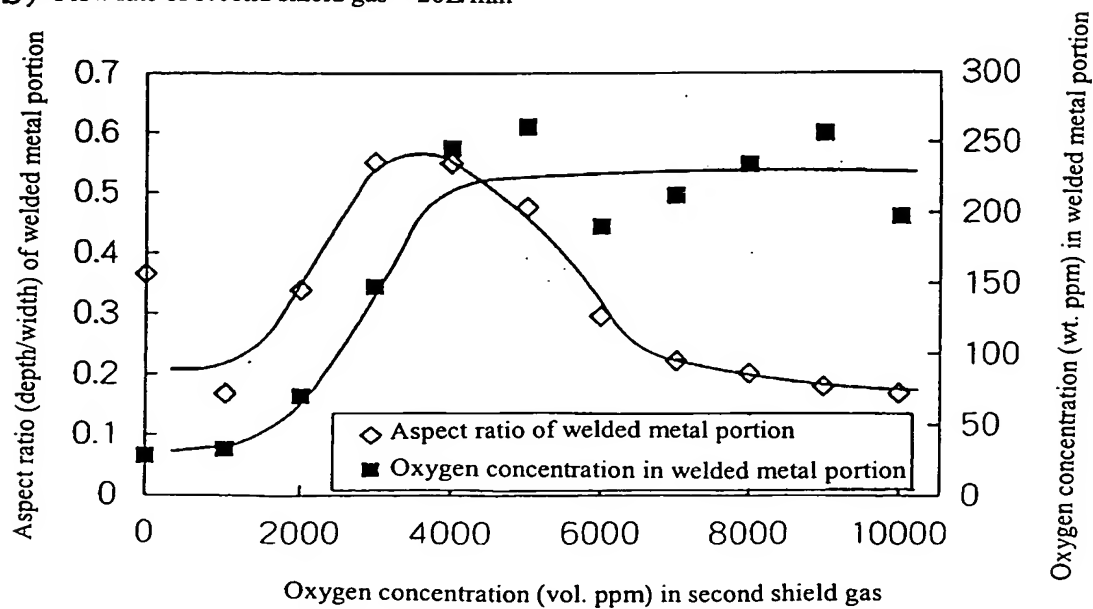


FIG. 11

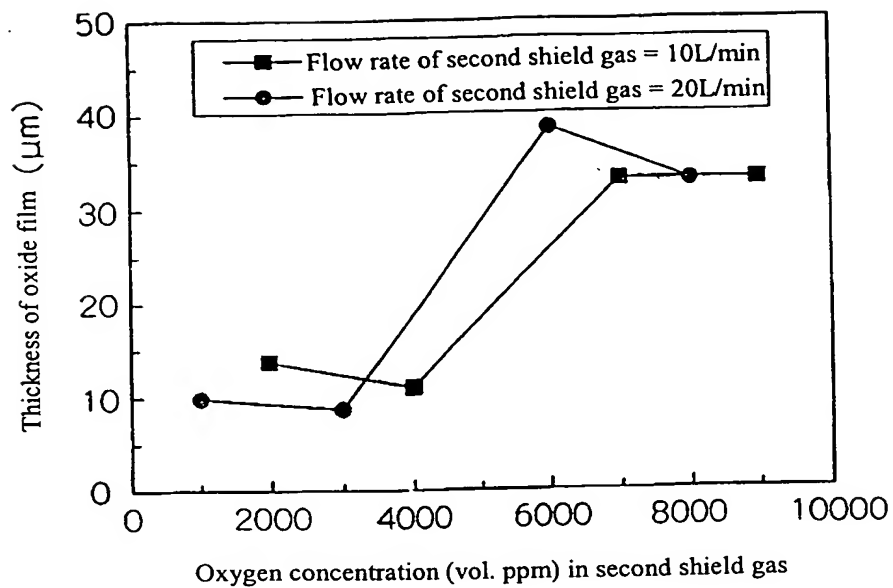


FIG. 12

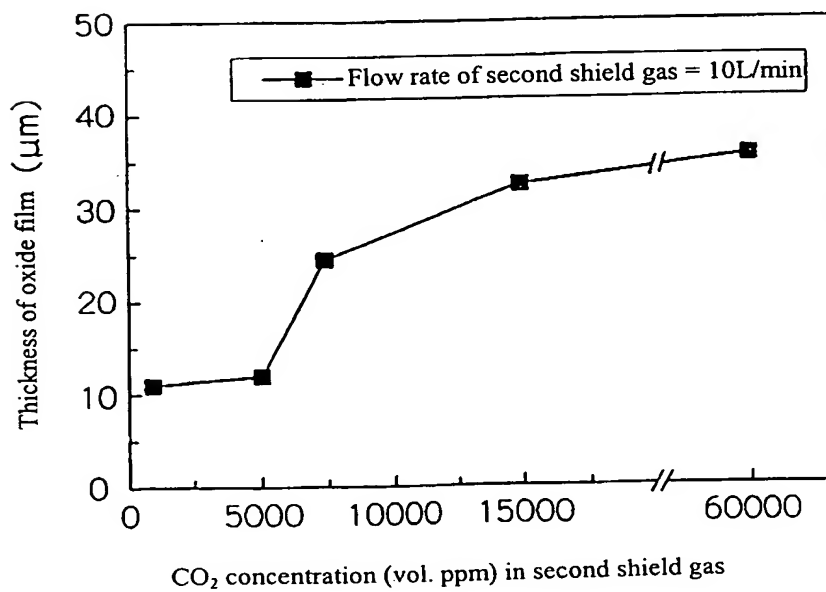


FIG. 13